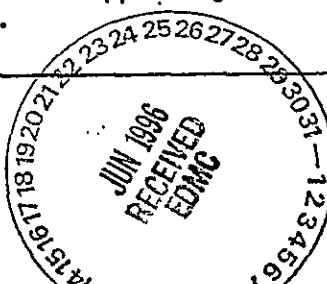


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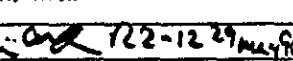
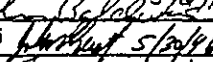

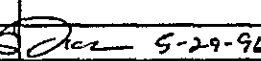
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"INTERIM SAFETY SCREENING RESULTS FOR TANK 241-U-109, ROTARY AND PUSH MODE CORES 123, 124 AND 128"

George L. Miller

Westinghouse Hanford Company, Richland, WA 99352
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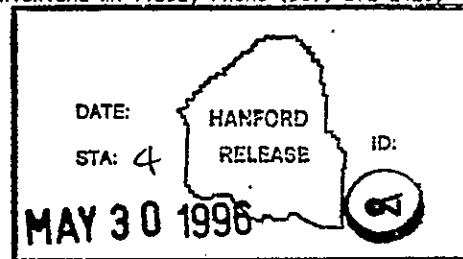
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ANALYTICAL SERVICES

**INTERIM SAFETY SCREENING RESULTS FOR
TANK 241-U-109, ROTARY AND PUSH MODE
CORES 123, 124, AND 128**

Project Coordinator: JOHN H. BALDWIN

**Prepared for the U.S. Department of Energy
Office of Environmental Restoration
and Waste Management**

by

**Westinghouse Hanford Company
Box 1970
Richland, Washington**

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NARRATIVE

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SAFETY SCREEN RESULTS FOR TANK 241-U-109
PUSH MODE SAMPLES, CORE 123, CORE 124 AND CORE 128

Summary

This is the safety screening report for rotary (push mode) core samples taken from risers 2, 7 and 19 of tank 241-U-109 (U-109) from December 20, 1995 through January 19, 1996. The samples were received, extruded, and analyzed at the 222-S Laboratories and underwent analyses consistent with the safety screening data quality objective (DQO) (Dukelow, et al. 1995), the organic DQO (Turner et al. 1995), the organic test plan (Meacham 1995) and the historical DQO (Simpson and McCain 1995) as identified in the Sampling and Analysis Plan for this tank (Baldwin 1996). This safety report summarizes the results of the analyses required by the safety DQO. In addition to the laboratory analytical requirements, a test for flammable gas concentration in the tank domespace was conducted at each riser.

The safety screening results obtained from this sampling and analysis activity, which include differential scanning calorimetry (DSC), thermogravimetric analysis (TGA), and total alpha activity analysis results, suggest that tank U-109 may be classified as "safe".

Eleven of the segments from the three cores showed exothermic behavior. The exotherms were observed primarily in the 6th segment and extending approximately two segments above and below the 6th segment (4-8). The exotherms varied between 13.7 to 302 joules/g on a dry weight basis. The one-sided 95 percent confidence interval upper limits for the dry DSC results determined that one segment (Core 128 Segment 4L) slightly exceeded the DSC notification limit of 480 J/g limit with a calculated value of 493.4 J/g. This calculated value was a result of the variability in the data. The highest measured dry DSC result for Core 128 Segment 4L is 267.6 J/g, well below the DSC notification limit.

The one-sided 95 percent confidence interval upper limits for the total alpha activity results were all well below the total alpha activity notification limit.

The flammable gas concentration in the tank domespace measured between 1% and 5% of the lower flammability level.

The data summary tables included in this report compile the safety screening analytical results associated with each subsegment from these core samples. In addition, the results of the statistical analysis (calculation of the 95% confidence intervals for DSC analyses) is given in Table 2 on a segment by segment basis.

Sample Receipt and Extrusion

Table 1 summarizes the sample extrusion results for the tank U-109 core segments. For each segment, the recovery and a description of the material as it was extruded are included.

TABLE 1: SUMMARY DESCRIPTION OF U-109 EXTRUSION SAMPLES

Core and Segment* Number	Riser	Sample Total Weight (Grams)	Sample Collection General Description
Core 123 Segment 1(W)	2	79.3	No drainable liquid. Extruded approximately 2 to 3 inches of solids. The solids were medium grey in color and the texture resembled a fine crystalline saltcake. The lower portion was soft, like wet sand. The upper portion had larger crystals and was harder. Subsampled solids into one jar.
Core 123 Segment 2(W)	2	293.3	No drainable liquid. Extruded approximately 10 inches of solids. The solids were medium gray in color except for the bottom inch which was a grayish brown. The texture resembled a fine crystalline saltcake. The upper portion of the solids appeared drier than the lower portion. The solids were subsampled into one jar.
Core 123 Segment 3(W)	2	170.9	This is the upper part of segment 3. No drainable liquid. Extruded approximately 10 inches of solids. The solids were medium gray in color with a little green blue tint in the bottom 4 inches. The texture of the solids resembled a fine crystalline saltcake. The solids were subsampled into one jar.
Core 123 Segment 3A(W)	2	169.6	This is the lower part of segment 3. No drainable liquid. Extruded approximately 8 inches of solids. The solids were bluish gray in color and the texture resembled a damp saltcake. The solids were subsampled into one jar.
Core 123 Segment 4(W)	2	303.0	No drainable liquid. Extruded approximately 12 inches of solids. The solids were bluish gray in color and the texture resembled a damp saltcake. The solids were subsampled into one jar.
		106.3	No drainable liquid. Extruded approximately 4 inches of solids. The solids were bluish gray in color and the texture resembled a damp saltcake. The solids were subsampled into one jar.

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Core 123 Segment 6 (U),(L)	2	505.7	No drainable liquid. Extruded approximately 19 inches of solids. The solids were medium gray in color and the texture resembled a damp, putty like saltcake. The solids were subsampled into two jars.
Core 123 Segment 7 (U),(L)	2	393.6	No drainable liquid. Extruded approximately 14 inches of solids. The solids were medium gray in color with a bluish tint and the texture resembled a damp saltcake. The solids were subsampled into two jars.
Core 123 Segment 8 (U),(L)	2	454.1	No drainable liquid. Extruded approximately 16 inches of solids. The solids were medium gray in color with a bluish tint and the texture resembled a damp saltcake. The solids were subsampled into two jars.
Core 123 Segment 9 (A),(B), ©	2	419.9	No drainable liquid. Extruded approximately 16 inches of solids. The upper portion of the solids were dark gray, the middle portion was medium gray and the lower portion was yellow in color. The texture of the solids resembled a damp saltcake. The solids were subsampled into three jars.

Core 124 Segment 2(W)	19	26.6	No drainable liquid. Extruded approximately 2 inches of solids. The solids were black in color with a white/gray tint. The texture of the solids resembled a hard, slightly damp crystalline saltcake. The solids were subsampled into one jar.
Core 124 Segment 3DL,3(W)	19	372.2	Collected approximately 125 ml of drainable liquid. The liquid was black in color and opaque. Extruded approximately 10 inches of solids. The solids were gray in color and the texture resembled a wet, slushy saltcake. The solids were subsampled in one jar.
Core 124 Segment 4(W)	19	246.1	No drainable liquid. Extruded approximately 9 inches of solids. The solids were gray in color with a blue tint. The texture resembled a dry granular saltcake. The solids were subsampled into one jar.
Core 124 Segment 5(U),5(L)	19	474.5	No drainable liquid. Extruded approximately 18 inches of solids. The solids were gray in color with a white tint. The texture resembled a damp, smooth saltcake. The solids were subsampled into two jars.
Core 124 Segment 6(U),6(L)	19	477.4	No drainable liquid. Extruded approximately 19 inches of solids. The solids were medium gray in color and the texture resembled a damp, putty like saltcake. The solids were subsampled into two jars.
Core 124 Segment 7(U),7(L)	19	448.0	No drainable liquid. Extruded approximately 17.5 inches of solids. The solids were medium gray in color and the texture resembled a damp, putty like saltcake. The solids were subsampled into two jars.
Core 124 Segment 8(U),8(L)	19	445.3	No drainable liquid. Extruded approximately 16 inches of solids. The solids were medium gray in color and the texture resembled a damp, putty like saltcake. The solids were subsampled in two jars.
Core 124 Segment 9(U),9(L)	19	249.5	No drainable liquid. Extruded approximately 12 inches of solids. The upper portion of solids were black in color and the texture resembled a smooth saltcake. The lower portion was gray in color and the texture resembled a slightly pitted saltcake. The solids were subsampled into two jars.

Core 128 Segment 1(W)	7	70.4	No drainable liquid. Extruded approximately 3 inches of solids. The solids were medium gray in color and the texture was a wet, crumbly saltcake. Subsampled solids into one jar.
Core 128 Segment 2(W)	7	143.9	No drainable liquid. Extruded approximately 6 inches of solids. The solids were medium gray in color with a bluish tint. The texture resembled a saltcake. The solids were subsampled into one jar.
Core 128 Segment 3(W)	7	216.1	No drainable liquid. Extruded approximately 10 inches of solids. The solids were medium gray in color with a bluish tint. The texture resembled a damp saltcake. The solids were subsampled into one jar.
Core 128 Segment 4(U),4(L)	7	314.4	No drainable liquid. Extruded approximately 14 inches of solids. The solids were dark gray in color. The texture of the solids resembled a wet saltcake. The solids were subsampled into half segments.
Core 128 Segment 5(W)	7	175.0	No drainable liquid. Extruded approximately 7 inches of solids. The solids were dark gray in color and the texture resembled a saltcake. The solids were subsampled into one jar.
Core 128 Segment 6(U),6(L)	7	381.4	No drainable liquid. Extruded approximately 16 inches of solids. The solids were dark gray in color and the texture resembled a wet saltcake. The solids were subsampled into half segments.
Core 128 Segment 7(U),7(L)	7	403.2	No drainable liquid. Extruded approximately 18 inches of solids. The solids were dark gray in color and the texture resembled a damp saltcake. The solids were subsampled into half segments.
Core 128 Segment 8(U),8(L)	7	439.5	No drainable liquid. Extruded approximately 17 inches of solids. The solids were dark gray in color and the texture resembled a saltcake. The solids were subsampled into half segments.
Core 128 Segment 9(W)	7	229.3	No drainable liquid. Extruded approximately 9 inches of solids. The solids ranged from brown to dark gray in color with white specks mixed throughout. The texture resembled a saltcake. The solids were subsampled into one jar.

* "W" represents a whole segment. "U" and "L" represent the upper and lower half sub-segments. "A", "B", "C" represent sub-segments locations with "A" the top of the segment, "B" the middle of the segment and "C" the bottom of the segment.

Analytical Results

DIFFERENTIAL SCANNING CALORIMETRY

Differential scanning calorimetry on the applicable subsegments from tank U-109 were performed under a nitrogen purge using procedures LA-514-113, Revs. C-1 (Mettler¹ instrument) and LA-514-114, Rev. C-1 (Perkin-Elmer² instrument). Since both instruments were used during the DSC analysis, it must be noted that the two instruments produce raw data scans which present exotherms differently. On the Mettler instrument, an exotherm is represented by a peak, while the Perkin-Elmer instrument shows an exotherm as a valley.

Due to the corrosive effects on the DSC instruments the SAP was revised to allow DSC's to be run on only the lower half of each segment.

Eleven of the segments from the three cores showed exothermic behavior. The exotherms were observed primarily in the 6th segment and extending approximately two segments above and below the 6th segment (4-8). The exotherms varied between 13.7 to 302 joules/g on a dry weight basis. The RPD's for four of the segments exceeded the criteria of $\leq 30\%$. Because of the variability between some of the samples result and duplicate values, a triplicate was run for three of the samples. The triplicate results showed the same variability so no other analyses were run to try to improve the results.

Statistical analyses for the 95% confidence interval were performed on the DSC data. The upper limit (UL) of this interval was then compared to the notification limit of 480 J/g. For each subsegment, the sample mean, the standard deviation (SD) of the mean, and the UL to the 95% confidence interval are presented in Table 2. If the UL of any subsegment is less than 480 J/g, the hypothesis that the subsegment's exotherm is greater than or equal to the notification limit is rejected.

The one-sided 95 percent confidence interval upper limits for the dry DSC results determined that one segment (Core 128 Segment 4L) exceeded the DSC notification limit of 480 J/g limit with a calculated value of 493.4 J/g. This high calculated value is a result of the variability in the data. The highest measured dry DSC result for Core 128 Segment 4L was 267.6 J/g, well below the DSC notification limit.

The standard recoveries for the solid and liquid samples were within the desired range of 80% - 120%.

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Table 2: 95% Confidence Interval Calculations for Tank U-109 DSC Results						
CORE/Segment	Unit	Result	Duplicate/ TriPLICATE	Average	SD(mean)	UL(95%)
123/ 6L	J/g	101	130.1/ 77.8	103	15.1	147.2
123/ 9A	J/g	30.5	57.3	43.9	13.4	128.5
124/ 5L	J/g	273.6	301.9	287.8	14.2	377.1
124/ 6L	J/g	141.1	151.7	146.4	5.3	179.9
124/ 6U	J/g	252.7	270	261.4	8.65	316
128/ 1	J/g	0	21.2/ 30.8	17.3	9.1	43.8
128/ 4L	J/g	267.6	182.6	225.1	42.5	493.4
128/ 5	J/g	13.7	21.24	17.5	3.8	41.3
128/ 6L	J/g	111.4	116.1	113.8	2.35	128.6
128/ 7L	J/g	131.1	134.4	132.8	1.7	143.2
128/ 8L	J/g	0	112.2/ 70.3	60.8	32.7	156.4

THERMOGRAVIMETRIC ANALYSIS (Percent Moisture)

Analyses for percent water by TGA were performed on the samples from tank U-109 and the field blank using procedures LA-560-112, Rev. B-1 (Mettler instrument) and LA-514-114, Rev. C-1 (Perkin-Elmer instrument). All samples were run under a nitrogen atmosphere.

Solid subsamples produced TGA results ranging from 6.00 (Core 123 Segment 3U) to 47.87 (Core 128 Segment 4L) weight percent water. The liquid sample (Core 124 Segment 3DL) produced an average TGA result of 53.2 weight percent water.

Six subsegments had RPD values that exceeded the desired $\leq 20\%$ criteria. A triplicate was run for two of the samples. The triplicate results showed the same variability so no other analyses were run to try to improve the results.

TGA analysis accuracy is determined by the standard recovery. All standard recoveries were within the LCS criteria range of 80% - 120%.

BULK DENSITY/SPECIFIC GRAVITY

The revised safety screening DQO (Dukelow, et al. 1995), states measurements of bulk density and specific gravity are to be performed on each subsample, primarily in order to convert the total alpha activity notification limit of 1 gram per liter (g/L) of plutonium-239 into units of microcuries per gram ($\mu\text{Ci/g}$) which is used by the laboratory. Generally, a density of 1.5 g/ml is used as a conservative estimate of density for unknown materials and using this density value the total alpha reporting limit is determined to be 41 $\mu\text{Ci/g}$. For U-109 the highest upper level total alpha result (segment 1 of core 128) was 0.16 $\mu\text{Ci/g}$, at 95% confidence, with a corresponding density of 1.68 g/ml. The corrected reporting limit would be 37 $\mu\text{Ci/g}$.

Procedure LO-160-103, Rev. B-0 was used to perform the bulk density measurements on the solid core composite samples, and procedure LA-510-112, Rev. C-3 was used during the specific gravity analyses on the drainable liquid samples.

In order to conserve sample material, no duplicate analyses were performed as part of the bulk density measurements, so no estimate of precision can be made. Further, no standard is run with this analysis, so there is no accuracy evaluation possible.

TOTAL ALPHA ACTIVITY

Per the safety screening DQO and the SAP, total alpha analyses were performed on the solid and liquid samples using procedure LA-508-101, Rev. D-2. Fusion digestions on the solid subsegments were prepared using procedure LA-549-141, Rev. E-0 and F-0, while the liquid samples were run without any preparation (i.e., direct analysis). The fusion preparation on the solid samples is identified by a "Z" in the aliquot or "A" column of the data summary tables. The highest alpha result was 0.15 $\mu\text{Ci/g}$ in segment 1 of core 128, well below the upper limit of 41 $\mu\text{Ci/g}$. The corresponding upper limit 95% value is 0.16 $\mu\text{Ci/g}$.

Because the total alpha results were close to the detection limit the RPD values generally exceeded the $\leq 20\%$ criterion. As the largest of the average results for the total alpha analyses is nearly 250 times lower than the notification limit, and is near the detection limit, no further reruns were requested. Five of the 42 total alpha spike recoveries were slightly below the desired range of 75% - 125%. Generally, low spike recoveries occur because large sample sizes are used for the analyses, resulting in high amounts of solid material on the sample mount. All standard recoveries, which measure the accuracy of the total alpha analyses, were within the desired range of 80% - 120%.

VISUAL ORGANIC

No organic layer was observed in the drinable liquid.

Project Coordinator: John H. Baldwin

REFERENCES

Baldwin, J. H., 1996, Tank 241-U-109 Push Mode Core Sampling and Analysis Plan, WHC-SD-WM-TSAP-052, Revision 1A, Westinghouse Hanford Company, Richland, Washington.

Dukelow, G. T., J. W. Hunt, H. Babad, J. E. Meacham, 1995, Tank Safety Screening Data Quality Objective, WHC-SD-WM-SP-004, Revision 2, Westinghouse Hanford Company, Richland, Washington.

Meacham, J. E., 1995, Test Plan for Samples From Hanford Waste Tanks 241-BY-103, BY-104, BY-105, BY-106, BY-108, BY-110, TY-103, U-105, U-107, U-108, and U-109, WHC-SD-WM-TP-378, Rev. 0, Westinghouse Hanford Company, Richland, Washington.

Simpson, B. C., and D. J. McCain, 1995, Historical Model Evaluation Data Requirements, WHC-SD-WM-DQO-018, Revision 0A, Westinghouse Hanford Company, Richland, Washington.

Turner, D. A., H. Babad, L. L. Buckley, J. E. Meacham, 1995, Data Quality Objective to Support Resolution of the Organic Complexant Safety Issue, WHC-SD-WM-DQO-006, Rev. 2, Westinghouse Hanford Company, Richland, Washington.

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SAMPLE DATA SUMMARY

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INTERIM

U-109 Safety Screening Report
U-109 (P)

Page: 12

CORE NUMBER: 123
SEGMENT #: 1

SEGMENT PORTION: W Whole Segment

Sample#	R	A#	Analyte	Unit	Action Limits		Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
					Lower	Upper									
S96T000177			% Water by TGA on Perkin Elmer	%	None	None	101.2	n/a	21.76	2.056e1	2.116e1	5.67	n/a	n/a	n/a
S96T000177			DSC Exotherm on Perkin Elmer	Joules/g	-1.0e+00	480.0	100.5	n/a	0.00e+00	0.000e0	0.000e0	0.00	n/a	n/a	n/a
S96T000177			DSC Exotherm Dry Calculated	Joules/g Dry	-1.0e+00	480.0	n/a	n/a	0.00e+00	0.000e0	0.000e0	0.00	n/a	n/a	n/a
S96T000207			Bulk Density of Sample	g/mL	None	None	n/a	n/a	1.850	n/a	n/a	n/a	n/a	5.000e-1	n/a
S96T000256	Z		Alpha of Digested Solid	uCi/g	-1.0e+00	41.00	113.2	<4.670e-3	2.36e-02	2.670e-2	2.510e-2	12.3	73.98	7.000e-3	3.41E+01

=> Limit violated
=> Selected Limit

WHC-SD-WM-DP-181, REV.0

INTERIM

U-109 Safety Screening Report
U-109 (P)

CORE NUMBER: 123
SEGMENT #: 2

SEGMENT PORTION: W Whole Segment

Sample#	R	A#	Analyte	Unit	Action Limits		Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
					Lower	Upper									
S96T000178			% Water by TGA using Mettler	%	None	None	102.1	n/a	17.33	1.578e1	1.655e1	9.36	n/a	n/a	n/a
S96T000178			DSC Exotherm Dry Calculated	Joules/g Dry	-1.0e+00	480.0	n/a	n/a	0.00e+00	0.000e0	0.000e0	0.00	n/a	n/a	n/a
S96T000178			DSC Exotherm using Mettler	Joules/g	-1.0e+00	480.0	97.01	n/a	0.00e+00	0.000e0	0.000e0	0.00	n/a	n/a	n/a
S96T000208			Bulk Density of Sample	g/mL	None	None	n/a	n/a	1.810	n/a	n/a	n/a	n/a	5.000e-1	n/a
S96T000259	Z		Alpha of Digested Solid	uCi/g	-1.0e+00	41.00	113.2	<4.670e-3	1.57e-02	2.220e-2	1.900e-2	34.3	74.49	7.000e-3	5.00E+01

=> Limit violated
=> Selected Limit

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A-0002-1

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U-109 (P)

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CORE NUMBER: 123

SEGMENT #: 3(U)

SEGMENT PORTION: U Upper Half of Segment

Sample#	R	A#	Analyte	Unit	Action Limits		Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
					Lower	Upper									
S96T000179			% Water by TGA using Mettler	%	None	None	101.7	n/a	6.000	6.760e0	6.380e0	11.9	n/a	n/a	n/a
S96T000179			DSC Exotherm Dry Calculated	Joules/g Dry	-1.0e+00	480.0	n/a	n/a	0.00e+00	0.000e0	0.000e0	0.00	n/a	n/a	n/a
S96T000179			DSC Exotherm using Mettler	Joules/g	-1.0e+00	480.0	94.20	n/a	0.00e+00	0.000e0	0.000e0	0.00	n/a	n/a	n/a
S96T000209			Bulk Density of Sample	g/mL	None	None	n/a	n/a	1.240	n/a	n/a	n/a	n/a	5.000e-1	n/a
S96T000260	Z		Alpha of Digested Solid	uCi/g	-1.0e+00	41.00	113.2	<4.670e-3	1.24e-02	1.290e-2	1.260e-2	3.95	75.26	6.000e-3	4.33E+01

=> Limit violated

=> Selected Limit

9T

INTERIM

WHC-SD-WM-DP-181, REV.0

INTERIM

U-109 Safety Screening Report
U-109 (P)

CORE NUMBER: 123
SEGMENT #: 3(L)

SEGMENT PORTION: L Lower Half of Segment

Sample#	R	A#	Analyte	Unit	Action Limits		Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
					Lower	Upper									
S96T000180			% Water by TGA using Mettler	%	None	None	102.0	n/a	8.620	8.350e0	8.485e0	3.18	n/a	n/a	n/a
S96T000180			DSC Exotherm Dry Calculated	Joules/g Dry	-1.0e+00	480.0	n/a	n/a	0.00e+00	0.000e0	0.000e0	0.00	n/a	n/a	n/a
S96T000180			DSC Exotherm using Mettler	Joules/g	-1.0e+00	480.0	94.20	n/a	0.00e+00	0.000e0	0.000e0	0.00	n/a	n/a	n/a
S96T000210			Bulk Density of Sample	g/mL	None	None	n/a	n/a	1.300	n/a	n/a	n/a	n/a	5.000e-1	n/a
S96T000261	Z		Alpha of Digested Solid	wt/g	-1.0e+00	41.00	113.2	<4.670e-3	1.24e-02	5.400e-3	8.900e-3	78.7	76.79	6.000e-3	5.63E+01

=> Limit violated

=> Selected Limit

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INTERIM

U-109 Safety Screening Report
U-109 (P)

CORE NUMBER: 123
SEGMENT #: 4

SEGMENT PORTION: W Whole Segment

Sample#	R	A#	Analyte	Unit	Action Limits		Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
					Lower	Upper									
S96T000181			% Water by TGA using Mettler	%	None	None	101.7	n/a	8.430	9.430e0	8.930e0	11.2	n/a	n/a	n/a
S96T000181			DSC Exotherm Dry Calculated	Joules/g Dry	-1.0e+00	480.0	n/a	n/a	0.00e+00	0.000e0	0.000e0	0.00	n/a	n/a	n/a
S96T000181			DSC Exotherm using Mettler	Joules/g	-1.0e+00	480.0	95.25	n/a	0.00e+00	0.000e0	0.000e0	0.00	n/a	n/a	n/a
S96T000211			Bulk Density of Sample	g/mL	None	None	n/a	n/a	1.678	n/a	n/a	n/a	n/a	5.000e-1	n/a
S96T000262	Z		Alpha of Digested Solid	uCi/g	-1.0e+00	41.00	98.80	<1.980e-3	5.53e-02	3.020e-2	4.280e-2	58.7	98.98	3.000e-3	1.62E+01

=> Limit violated
=> Selected Limit

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U-109 (P)

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CORE NUMBER: 123
SEGMENT #: 5

SEGMENT PORTION: W Whole Segment

Sample#	R	A#	Analyte	Unit	Action Limits		Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
					Lower	Upper									
S96T000182			% Water by TGA using Mettler	%	None	None	102.3	n/a	10.79	1.306e1	1.193e1	19.0	n/a	n/a	n/a
S96T000182			DSC Exotherm Dry Calculated	Joules/g Dry	-1.0e+00	480.0	n/a	n/a	0.00e+00	0.000e0	0.000e0	0.00	n/a	n/a	n/a
S96T000182			DSC Exotherm using Mettler	Joules/g	-1.0e+00	480.0	95.25	n/a	0.00e+00	0.000e0	0.000e0	0.00	n/a	n/a	n/a
S96T000212			Bulk Density of Sample	g/mL	None	None	n/a	n/a	1.590	n/a	n/a	n/a	n/a	5.000e-1	n/a
S96T000263	2		Alpha of Digested Solid	uCi/g	-1.0e+00	41.00	98.80	<1.980e-3	3.24e-02	2.610e-2	2.920e-2	21.5	105.6	2.000e-3	2.10E+01

=> Limit violated
=> Selected Limit

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INTERIM

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U-109 (P)

Page: 4

CORE NUMBER: 123
SEGMENT #: 6(U)

SEGMENT PORTION: U Upper Half of Segment

Sample#	R	A#	Analyte	Unit	Action Limits		Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
					Lower	Upper									
S96T000183			% Water by TGA on Perkin Elmer	%	None	None	101.5	n/a	23.63	2.369e1	2.366e1	0.25	n/a	n/a	n/a
S96T000213			Bulk Density of Sample	g/mL	None	None	n/a	n/a	1.680	n/a	n/a	n/a	n/a	5.000e-1	n/a

=> Limit violated

=> Selected Limit

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U-109 Safety Screening Report
U-109 (P)

CORE NUMBER: 123
SEGMENT #: 6(L)

SEGMENT PORTION: L Lower Half of Segment

Sample#	R	A#	Analyte	Unit	Action Limits		Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
					Lower	Upper									
S96T000172			Bulk Density of Sample	g/mL	None	None	n/a	n/a	1.750	n/a	n/a	n/a	n/a	5.000e-1	n/a
S96T000184			% Water by TGA on Perkin Elmer	%	None	None	101.5	n/a	37.41	2.655e1	3.198e1	34.0	n/a	n/a	n/a
S96T000184			DSC Exotherm Dry Calculated	Joules/g Dry	-1.0e+00	480.00	n/a	n/a	1.01e+02	1.301e2	1.155e2	25.2	n/a	n/a	n/a
S96T000184			DSC Exotherm using Mettler	Joules/g	-1.0e+00	480.00	114.9	n/a	68.70	8.850e1	7.860e1	25.2	n/a	n/a	n/a
S96T000265	Z		Alpha of Digested Solid	uCi/g	-1.0e+00	41.00	98.80	<1.980e-3	2.82e-02	2.920e-2	2.870e-2	3.48	104.8	2.000e-3	2.21E+01

=> Limit violated
=> Selected Limit

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U-109 Safety Screening Report
U-109 (P)

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CORE NUMBER: 123
SEGMENT #: 7(U)

SEGMENT PORTION: U Upper Half of Segment

Sample#	R	A#	Analyte	Unit	Action Limits		Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
					Lower	Upper									
S96T000185			% Water by TGA using Mettler	%	None	None	102.4	n/a	19.84	1.921e1	1.952e1	3.23	n/a	n/a	n/a
S96T000214			Bulk Density of Sample	g/ml	None	None	n/a	n/a	1.820	n/a	n/a	n/a	n/a	5.000e-1	n/a

=> Limit violated

=> Selected Limit

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INTERIM

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U-109 (P)

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CORE NUMBER: 123
SEGMENT #: 7(L)

SEGMENT PORTION: L Lower Half of Segment

Sample#	R	A#	Analyte	Unit	Action Limits		Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
					Lower	Upper									
S96T000173			Bulk Density of Sample	g/mL	None	None	n/a	n/a	1.870	n/a	n/a	n/a	n/a	5.000e-1	n/a
S96T000186			% Water by TGA using Mettler	%	None	None	102.4	n/a	15.24	2.001e1	1.762e1	27.1	n/a	n/a	n/a
S96T000186			DSC Exotherm Dry Calculated	Joules/g Dry	-1.0e+00	480.0	n/a	n/a	0.00e+00	0.000e0	0.000e0	0.00	n/a	n/a	n/a
S96T000186			DSC Exotherm using Mettler	Joules/g	-1.0e+00	480.0	94.55	n/a	0.00e+00	0.000e0	0.000e0	0.00	n/a	n/a	n/a
S96T000267	Z		Alpha of Digested Solid	uCi/g	-1.0e+00	41.00	106.6	<1.550e-3	1.63e-02	1.100e-2	1.360e-2	38.8	74.74	1.000e-3	1.43E+01

=> Limit violated
=> Selected Limit

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INTERIM

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U-109 (P)

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CORE NUMBER: 123
SEGMENT #: 8(U)

SEGMENT PORTION: U Upper Half of Segment

Sample#	R	A#	Analyte	Unit	Action Limits		Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
					Lower	Upper									
S96T000187			% Water by TGA using Mettler	%	None	None	102.4	n/a	22.27	2.496e1	2.362e1	11.4	n/a	n/a	n/a
S96T000187			DSC Exotherm Dry Calculated	Joules/g Dry	-1.0e+00	480.0	n/a	n/a	0.00e+00	0.000e0	0.000e0	0.00	n/a	n/a	n/a
S96T000187			DSC Exotherm using Mettler	Joules/g	-1.0e+00	480.0	97.72	n/a	0.00e+00	0.000e0	0.000e0	0.00	n/a	n/a	n/a
S96T000215			Bulk Density of Sample	g/mL	None	None	n/a	n/a	1.820	n/a	n/a	n/a	n/a	5.000e-1	n/a

=> Limit violated
=> Selected Limit

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U-109 Safety Screening Report
U-109 (P)

CORE NUMBER: 123
SEGMENT #: 8(L)

SEGMENT PORTION: L Lower Half of Segment

Sample#	R	A#	Analyte	Unit	Action Limits		Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
					Lower	Upper									
S96T000174			Bulk Density of Sample	g/mL	None	None	n/a	n/a	1.840	n/a	n/a	n/a	n/a	5.000e-1	n/a
S96T000188			% Water by TGA using Mettler	%	None	None	102.4	n/a	17.54	2.029e1	1.891e1	14.5	n/a	n/a	n/a
S96T000188			DSC Exotherm Dry Calculated	Joules/g Dry	-1.0e+00	480.0	n/a	n/a	0.00e+00	0.000e0	0.000e0	0.00	n/a	n/a	n/a
S96T000188			DSC Exotherm using Mettler	Joules/g	-1.0e+00	480.0	97.72	n/a	0.00e+00	0.000e0	0.000e0	0.00	n/a	n/a	n/a
S96T000269	Z		Alpha of Digested Solid	uCi/g	-1.0e+00	41.00	106.6	<1.550e-3	1.58e-02	1.600e-2	1.590e-2	1.26	76.02	1.000e-3	1.27E+01

=> Limit violated
=> Selected Limit

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U-109 Safety Screening Report
U-109 (P)

CORE NUMBER: 123
SEGMENT #: 9(A)

SEGMENT PORTION: A Top Quarter of Segment

Sample#	R	A#	Analyte	Unit	Action Limits		Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
					Lower	Upper									
S96T000189			% Water by TGA using Mettler	%	None	None	101.3	n/a	37.02	3.833e1	3.767e1	3.48	n/a	n/a	n/a
S96T000189			DSC Exotherm Dry Calculated	Joules/g Dry	-1.0e+00	480.0	n/a	n/a	30.50	5.730e1	4.390e1	61.0	n/a	n/a	n/a
S96T000189			DSC Exotherm using Mettler	Joules/g	-1.0e+00	480.0	92.44	n/a	19.00	3.570e1	2.735e1	61.1	n/a	n/a	n/a
S96T000216			Bulk Density of Sample	g/mL	None	None	n/a	n/a	1.420	n/a	n/a	n/a	n/a	5.000e-1	n/a

=> Limit violated
=> Selected Limit

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INTERIM

U-109 Safety Screening Report
U-109 (P)

CORE NUMBER: 123
SEGMENT #: 9(B)

SEGMENT PORTION: B Second Quarter of Segment

Sample#	R	A#	Analyte	Unit	Action Limits		Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
					Lower	Upper									
S96T000175			Bulk Density of Sample	g/mL	None	None	n/a	n/a	comment	n/a	n/a	n/a	n/a	5.000e-1	n/a
S96T000190			% Water by TGA using Mettler	%	None	None	100.9	n/a	17.91	2.386e1	2.088e1	28.5	n/a	n/a	n/a
S96T000190			DSC Exotherm Dry Calculated	Joules/g Dry	-1.0e+00	480.0	n/a	n/a	0.00e+00	0.000e0	0.000e0	0.00	n/a	n/a	n/a
S96T000190			DSC Exotherm using Mettler	Joules/g	-1.0e+00	480.0	92.44	n/a	0.00e+00	0.000e0	0.000e0	0.00	n/a	n/a	n/a

=> Limit violated

=> Selected Limit

INTERIM

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INTERIM

U-109 Safety Screening Report
U-109 (P)

CORE NUMBER: 123
SEGMENT #: 9(C)

SEGMENT PORTION: C Third Quarter of Segment

Sample#	R	A#	Analyte	Unit	Action Limits		Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
					Lower	Upper									
S96T000176			Bulk Density of Sample	g/mL	None	None	n/a	n/a	1.970	n/a	n/a	n/a	n/a	5.000e-1	n/a
S96T000191			% Water by TGA on Perkin Elmer	%	None	None	100.7	n/a	17.38	1.680e1	1.709e1	3.39	n/a	n/a	n/a
S96T000191			DSC Exotherm Dry Calculated	Joules/g Dry	-1.0e+00	480.0	n/a	n/a	0.00e+00	0.000e0	0.000e0	0.00	n/a	n/a	n/a
S96T000191			DSC Exotherm using Mettler	Joules/g	-1.0e+00	480.0	111.1	n/a	0.00e+00	0.000e0	0.000e0	0.00	n/a	n/a	n/a
S96T000272	Z		Alpha of Digested Solid	uCi/g	-1.0e+00	41.00	101.0	<3.060e-3	1.14e-02	1.140e-2	1.140e-2	0.00	72.96	7.000e-3	5.54E+01

=> Limit violated
=> Selected Limit

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INTERIM

U-109 Safety Screening Report
U-109 (P)

CORE NUMBER: 124
SEGMENT #: 2

SEGMENT PORTION: W Whole Segment

Sample#	R	A#	Analyte	Unit	Action Limits		Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
					Lower	Upper									
S96T000298			% Water by TGA on Perkin Elmer	%	None	None	102.3	n/a	15.85	1.964e1	1.775e1	21.4	n/a	n/a	n/a
S96T000298			DSC Exotherm Dry Calculated	Joules/g Dry	-1.0e+00	480.0	n/a	n/a	0.00e+00	0.000e0	0.000e0	0.00	n/a	n/a	n/a
S96T000298			DSC Exotherm using Mettler	Joules/g	-1.0e+00	480.0	108.6	n/a	0.00e+00	0.000e0	0.000e0	0.00	n/a	n/a	n/a
S96T000344	Z		Alpha of Digested Solid	uCi/g	-1.0e+00	41.80	86.75	<3.280e-3	6.55e-02	7.130e-2	6.840e-2	8.48	79.59	5.000e-3	1.49E+01

=> Limit violated

=> Selected Limit

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U-109 Safety Screening Report
U-109 (P)

CORE NUMBER: 124
SEGMENT #: 3DL

SEGMENT PORTION: Drainable Liquid

Sample#	R	A#	Analyte	Unit	Action Limits		Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
					Lower	Upper									
S96T000280			% Water by TGA using Mettler	%	None	None	102.4	n/a	53.37	5.303e1	5.320e1	0.64	n/a	n/a	n/a
S96T000280			Specific Gravity	Sp.G.	None	None	99.14	n/a	1.397	1.398e0	1.397e0	0.07	n/a	1.000e-3	n/a
S96T000280			DSC Exotherm Dry Calculated	Joules/g Dry	-1.0e+00	480.0	n/a	n/a		n/a	n/a	n/a	n/a	n/a	n/a
S96T000280			DSC Exotherm using Mettler	Joules/g	-1.0e+00	480.0	97.72	n/a	0.00e+00	0.000e0	0.000e0	0.00	n/a	n/a	n/a
S96T000280			Alpha in Liquid Samples	uCi/mL	-1.0e+00	41.00	93.14	<2.290e-7	1.07e-03	<9.27E-4	n/a	n/a	91.07	2.000e-3	1.22E+02

=> Limit violated
=> Selected Limit

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INTERIM

U-109 Safety Screening Report
U-109 (P)

CORE NUMBER: 124

SEGMENT #: 3

SEGMENT PORTION: W Whole Segment

Sample#	R	A#	Analyte	Unit	Action Limits		Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count	Err%
					Lower	Upper										
S96T000282			Bulk Density of Sample	g/mL	None	None	n/a	n/a	1.660	n/a	n/a	n/a	n/a	5.000e-1		n/a
S96T000299			% Water by TGA on Perkin Elmer	%	None	None	100.7	n/a	42.89	4.108e1	4.198e1	4.31	n/a	n/a		n/a
S96T000299			DSC Exotherm Dry Calculated	Joules/g Dry	-1.0e+00	480.0	n/a	n/a	0.00e+00	0.000e0	0.000e0	0.00	n/a	n/a		n/a
S96T000299			DSC Exotherm using Mettler	Joules/g	-1.0e+00	480.0	108.6	n/a	0.00e+00	0.000e0	0.000e0	0.00	n/a	n/a		n/a
S96T000345	Z		Alpha of Digested Solid	uCi/g	-1.0e+00	4.100	86.75	<3.280e-3	4.52e-02	5.130e-2	4.830e-2	12.6	77.30	5.000e-3		1.89E+01

=> Limit violated

=> Selected Limit

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INTERIM

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INTERIM

U-109 Safety Screening Report
U-109 (P)

CORE NUMBER: 124
SEGMENT #: 4

SEGMENT PORTION: W Whole Segment

Sample#	R	A#	Analyte	Unit	Action Limits		Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
					Lower	Upper									
S96T000283			Bulk Density of Sample	g/mL	None	None	n/a	n/a	1.620	n/a	n/a	n/a	n/a	5.000e-1	n/a
S96T000300			% Water by TGA on Perkin Elmer	%	None	None	102.1	n/a	11.69	1.033e1	1.101e1	12.4	n/a	n/a	n/a
S96T000300			DSC Exotherm Dry Calculated	Joules/g Dry	-1.0e+00	480.0	n/a	n/a	0.00e+00	0.000e0	0.000e0	0.00	n/a	n/a	n/a
S96T000300			DSC Exotherm using Mettler	Joules/g	-1.0e+00	480.0	101.6	n/a	0.00e+00	0.000e0	0.000e0	0.00	n/a	n/a	n/a
S96T000346	Z		Alpha of Digested Solid	uCi/g	-1.0e+00	41.00	86.75	<3.280e-3	3.21e-02	3.070e-2	3.140e-2	4.46	78.32	5.000e-3	2.39E+01

=> Limit violated
=> Selected Limit

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INTERIM

WHC-SD-WM-DP-181, REV. 0

INTERIM

U-109 Safety Screening Report
U-109 (P)

CORE NUMBER: 124
SEGMENT #: 5(U)

SEGMENT PORTION: U Upper Half of Segment

Sample#	R	A#	Analyte	Unit	Action Limits		Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
					Lower	Upper									
S96T000284			Bulk Density of Sample	g/mL	None	None	n/a	n/a	1.730	n/a	n/a	n/a	n/a	5.000e-1	n/a
S96T000301			% Water by TGA using Mettler	%	None	None	99.98	n/a	20.73	2.435e1	2.254e1	16.1	n/a	n/a	n/a
S96T000347	Z		Alpha of Digested Solid	uCi/g	-1.0e+00	4.1e+00	95.78	<3.350e-3	2.43e-02	4.610e-2	3.520e-2	61.9	83.42	7.000e-3	2.95E+01

=> Limit violated

=> Selected Limit

33

INTERIM

WHC-SD-WM-DP-181, REV. 0

INTERIM

U-109 Safety Screening Report
U-109 (P)

CORE NUMBER: 124
SEGMENT #: 5(L)

SEGMENT PORTION: L Lower Half of Segment

Sample#	R	A#	Analyte	Unit	Action Limits		Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count	Err%
					Lower	Upper										
S96T000285			Bulk Density of Sample	g/mL	None	None	n/a	n/a	1.720	n/a	n/a	n/a	n/a	5.000e-1		n/a
S96T000302			% Water by TGA using Mettler	%	None	None	99.59	n/a	19.66	2.316e1	2.141e1	16.3	n/a	n/a		n/a
S96T000302			DSC Exotherm Dry Calculated	Joules/g Dry	-1.0e+00	480.0	n/a	n/a	2.74e+02	3.019e2	2.878e2	9.83	n/a	n/a		n/a
S96T000302			DSC Exotherm using Mettler	Joules/g	-1.0e+00	480.0	97.72	n/a	2.15e+02	2.373e2	2.262e2	9.86	n/a	n/a		n/a
S96T000348	Z		Alpha of Digested Solid	uCi/g	-1.0e+00	41.00	95.78	<3.350e-3	2.03e+02	1.950e-2	1.990e-2	4.02	82.14	6.000e-3		3.01E+01

=> Limit violated
=> Selected Limit

INTERIM

WHC-SD-WM-DP-181, REV. 0

INTERIM

U-109 Safety Screening Report
U-109 (P)

CORE NUMBER: 124
SEGMENT #: 6(U)

SEGMENT PORTION: U Upper Half of Segment

Sample#	R	A#	Analyte	Unit	Action Limits		Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
					Lower	Upper									
S96T000286			Bulk Density of Sample	g/mL	None	None	n/a	n/a	1.680	n/a	n/a	n/a	n/a	5.000e-1	n/a
S96T000303			% Water by TGA using Mettler	%	None	None	99.59	n/a	30.97	2.665e1	2.881e1	15.0	n/a	n/a	n/a
S96T000303			DSC Exotherm Dry Calculated	Joules/g Dry	-1.0e+00	480.0	n/a	n/a	2.53e+02	2.700e2	2.614e2	6.62	n/a	n/a	n/a
S96T000303			DSC Exotherm using Mettler	Joules/g	-1.0e+00	480.0	97.72	n/a	1.80e+02	1.922e2	1.861e2	6.61	n/a	n/a	n/a
S96T000349	Z		Alpha of Digested Solid	uCi/g	-1.0e+00	41.00	90.96	<9.280e-3	3.63e-02	4.170e-2	3.900e-2	13.8	88.01	1.000e-2	3.21E+01

=> Limit violated

=> Selected Limit

WHC-SD-WM-DP-181, REV. 0

INTERIM

U-109 Safety Screening Report
U-109 (P)

CORE NUMBER: 124
SEGMENT #: 6(L)

SEGMENT PORTION: L Lower Half of Segment

Sample#	R	A#	Analyte	Unit	Action Limits		Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
					Lower	Upper									
S96T000287			Bulk Density of Sample	g/mL	None	None	n/a	n/a	1.660	n/a	n/a	n/a	n/a	5.000e-1	n/a
S96T000304			% Water by TGA using Mettler	%	None	None	99.59	n/a	36.39	3.557e1	3.598e1	2.28	n/a	n/a	n/a
S96T000304			DSC Exotherm Dry Calculated	Joules/g Dry	-1.0e+00	480.0	n/a	n/a	1.41e+02	1.517e2	1.464e2	7.24	n/a	n/a	n/a
S96T000304			DSC Exotherm using Mettler	Joules/g	-1.0e+00	480.0	97.72	n/a	90.30	9.710e1	9.370e1	7.26	n/a	n/a	n/a
S96T000350	Z		Alpha of Digested Solid	uCi/g	-1.0e+00	41.00	90.96	<9.280e-3	3.93e-02	3.930e-2	3.930e-2	0.00	87.76	1.000e-2	2.92E+01

=> Limit violated
=> Selected Limit

INTERIM

WHC-SD-WM-DP-181, REV. 0

INTERIM

U-109 Safety Screening Report
U-109 (P)

CORE NUMBER: 124
SEGMENT #: 7(U)

SEGMENT PORTION: U Upper Half of Segment

Sample#	R	A#	Analyte	Unit	Action Limits		Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
					Lower	Upper									
S96T000288			Bulk Density of Sample	g/mL	None	None	n/a	n/a	1.650	n/a	n/a	n/a	n/a	5.000e-1	n/a
S96T000305			% Water by TGA using Mettler	%	None	None	99.22	n/a	15.78	1.598e1	1.588e1	1.26	n/a	n/a	n/a
S96T000351	Z		Alpha of Digested Solid	uCi/g	-1.0e+00	41.00	90.96	<9.280e-3	1.92e-02	2.150e-2	2.040e-2	11.3	87.76	6.000e-3	3.53E+01

=> Limit violated
=> Selected Limit

INTERIM

WHC-SD-WM-DP-181, REV. 0

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INTERIM

U-109 Safety Screening Report
U-109 (P)

CORE NUMBER: 124
SEGMENT #: 7(L)

SEGMENT PORTION: 1. Lower Half of Segment

Sample#	R	A#	Analyte	Unit	Action Limits		Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
					Lower	Upper									
S96T000289			Bulk Density of Sample	g/mL	None	None	n/a	n/a	1.700	n/a	n/a	n/a	n/a	5.000e-1	n/a
S96T000306			% Water by TGA using Mettler	%	None	None	99.22	n/a	17.25	2.084e1	1.905e1	18.9	n/a	n/a	n/a
S96T000306			DSC Exotherm Dry Calculated	Joules/g Dry	-1.0e+00	480.0	n/a	n/a	0.00e+00	0.000e0	0.000e0	0.00	n/a	n/a	n/a
S96T000306			DSC Exotherm using Mettler	Joules/g	-1.0e+00	480.0	94.55	n/a	0.00e+00	0.000e0	0.000e0	0.00	n/a	n/a	n/a
S96T000352	Z		Alpha of Digested Solid	uCi/g	-1.0e+00	41.00	90.96	<9.280e-3	1.75e-02	1.250e-2	1.500e-2	33.3	90.56	5.000e-3	3.25E+01

=> Limit violated
=> Selected Limit

INTERIM

WHC-SD-WM-DP-181, REV. 0

INTERIM

U-109 Safety Screening Report
U-109 (P)

CORE NUMBER: 124
SEGMENT #: 8(U)

SEGMENT PORTION: U Upper Half of Segment

Sample#	R	A#	Analyte	Unit	Action Limits		Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
					Lower	Upper									
S96T000290			Bulk Density of Sample	g/mL	None	None	n/a	n/a	1.800	n/a	n/a	n/a	n/a	5.000e-1	n/a
S96T000307			% Water by TGA on Perkin Elmer	%	None	None	102.1	n/a	35.18	3.401e1	3.459e1	3.38	n/a	n/a	n/a
S96T000353	Z		Alpha of Digested Solid	uCi/g	-1.0e+00	4.1e+00	90.96	<1.100e-2	2.47e-02	2.500e-2	2.490e-2	1.21	75.26	1.400e-2	5.12E+01

=> Limit violated

=> Selected Limit

WHC-SD-WM-DP-181, REV. 0

INTERIM

U-109 Safety Screening Report
U-109 (P)

CORE NUMBER: 124
SEGMENT #: 8(L)

SEGMENT PORTION: L Lower Half of Segment

Sample#	R	A#	Analyte	Unit	Action Limits		Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
					Lower	Upper									
S96T000291			Bulk Density of Sample	g/mL	None	None	n/a	n/a	1.760	n/a	n/a	n/a	n/a	5.000e-1	n/a
S96T000308			% Water by TGA on Perkin Elmer	%	None	None	99.27	n/a	34.90	3.306e1	3.398e1	5.41	n/a	n/a	n/a
S96T000308			DSC Exotherm Dry Calculated	Joules/g Dry	-1.0e+00	480.0	n/a	n/a	0.00e+00	0.000e0	0.000e0	0.00	n/a	n/a	n/a
S96T000308			DSC Exotherm using Mettler	Joules/g	-1.0e+00	480.0	94.55	n/a	0.00e+00	0.000e0	0.000e0	0.00	n/a	n/a	n/a
S96T000354	Z		Alpha of Digested Solid	uCi/g	-1.0e+00	41.00	90.96	<1.100e-2	4.28e-02	4.960e-2	4.620e-2	14.7	79.59	1.400e-2	3.07E+01

=> Limit violated

=> Selected Limit

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INTERIM

WHC-SD-WM-DP-181, REV. 0

INTERIM

U-109 Safety Screening Report
U-109 (P)

CORE NUMBER: 124
SEGMENT #: 9(U)

SEGMENT PORTION: U Upper Half of Segment

Sample#	R	A#	Analyte	Unit	Action Limits		Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
					Lower	Upper									
S96T000292			Bulk Density of Sample	g/mL	None	None	n/a	n/a	1.680	n/a	n/a	n/a	n/a	5.000e-1	n/a
S96T000309			% Water by TGA using Mettler	%	None	None	99.12	n/a	35.87	3.441e1	3.514e1	4.15	n/a	n/a	n/a
S96T000355	Z		Alpha of Digested Solid	uCi/g	-1.0e+00	4.1e+00	90.96	<1.100e-2	4.76e-02	5.960e-2	5.360e-2	22.4	76.53	1.400e-2	2.91E+01

=> Limit violated
=> Selected Limit

WHC-SD-WM-DP-181, REV.0

INTERIM

U-109 Safety Screening Report
U-109 (P)

CORE NUMBER: 124

SEGMENT #: 9(L)

SEGMENT PORTION: L Lower Half of Segment

Sample#	R	A#	Analyte	Unit	Action Limits		Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
					Lower	Upper									
S96T000293			Bulk Density of Sample	g/ml	None	None	n/a	n/a	1.310	n/a	n/a	n/a	n/a	5.000e-1	n/a
S96T000310			% Water by TGA using Mettler	%	None	None	99.12	n/a	44.54	3.973e1	4.213e1	11.4	n/a	n/a	n/a
S96T000310			DSC Exotherm Dry Calculated	Joules/g Dry	-1.0e+00	480.0	n/a	n/a	0.00e+00	0.000e0	0.000e0	0.00	n/a	n/a	n/a
S96T000310			DSC Exotherm using Mettler	Joules/g	-1.0e+00	480.0	113.5	n/a	0.00e+00	0.000e0	0.000e0	0.00	n/a	n/a	n/a
S96T000356	Z		Alpha of Digested Solid	uCi/g	-1.0e+00	41.00	90.96	<1.100e-2	8.70e-02	8.810e-2	8.750e-2	1.26	81.38	7.000e-3	1.31E+01

=> Limit violated

=> Selected Limit

INTERIM

WHC-SD-WM-DP-181, REV. 0

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INTERIM

U-109 Safety Screening Report
U-109 (P)

CORE NUMBER: 128
SEGMENT #: 1

SEGMENT PORTION: W Whole Segment

Sample#	R	A#	Analyte	Unit	Action Limits		Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
					Lower	Upper									
S96T000410			Bulk Density of Sample	g/mL	None	None	n/a	n/a	1.680	n/a	n/a	n/a	n/a	5.000e-1	n/a
S96T000423			% Water by TGA using Mettler	%	None	None	99.59	n/a	31.04	3.175e1	3.139e1	2.26	n/a	n/a	n/a
S96T000423			DSC Exotherm Dry Calculated	Joules/g Dry	-1.0e+00	480.0	n/a	n/a	0.00e+00	2.115e1	1.057e1	200	n/a	n/a	n/a
S96T000423			DSC Exotherm using Mettler	Joules/g	-1.0e+00	480.0	98.77	n/a	0.00e+00	1.480e1	7.400e0	200	n/a	n/a	n/a
S96T000498	Z		Alpha of Digested Solid	uCi/g	-1.0e+00	41.00	91.57	<2.140e-3	1.49e-01	1.510e-1	1.500e-1	1.33	80.36	5.000e-3	9.61E+00

=> Limit violated
=> Selected Limit

WHC-SD-WM-DP-181, REV. 0

INTERIM

U-109 Safety Screening Report
U-109 (P)

CORE NUMBER: 128
SEGMENT #: 2

SEGMENT PORTION: W Whole Segment

Sample#	R	A#	Analyte	Unit	Action Limits		Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
					Lower	Upper									
S96T000411			Bulk Density of Sample	g/mL	None	None	n/a	n/a	1.740	n/a	n/a	n/a	n/a	5.000e-1	n/a
S96T000424			% Water by TGA using Mettler	%	None	None	99.59	n/a	25.60	1.514e1	2.037e1	51.4	n/a	n/a	n/a
S96T000424			DSC Exotherm Dry Calculated	Joules/g Dry	-1.0e+00	480.0	n/a	n/a	0.00e+00	0.000e0	0.000e0	0.00	n/a	n/a	n/a
S96T000424			DSC Exotherm using Mettler	Joules/g	-1.0e+00	480.0	98.77	n/a	0.00e+00	0.000e0	0.000e0	0.00	n/a	n/a	n/a
S96T000499	Z		Alpha of Digested Solid	uCi/g	-1.0e+00	41.00	87.95	7.00e-03	3.45e-02	4.190e-2	3.820e-2	19.4	70.41	7.000e-3	2.52E+01

=> Limit violated

=> Selected Limit

WHC-SD-WM-DP-181, REV. 0

INTERIM

U-109 Safety Screening Report
U-109 (P)

CORE NUMBER: 128
SEGMENT #: 3

SEGMENT PORTION: W Whole Segment

Sample#	R	A#	Analyte	Unit	Action Limits		Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
					Lower	Upper									
S96T000412			Bulk Density of Sample	g/mL	None	None	n/a	n/a	1.680	n/a	n/a	n/a	n/a	5.000e-1	n/a
S96T000425			% Water by TGA using Mettler	%	None	None	102.8	n/a	15.21	1.293e1	1.407e1	16.2	n/a	n/a	n/a
S96T000425			DSC Exotherm Dry Calculated	Joules/g Dry	-1.0e+00	480.0	n/a	n/a	0.00e+00	0.000e0	0.000e0	0.00	n/a	n/a	n/a
S96T000425			DSC Exotherm using Mettler	Joules/g	-1.0e+00	480.0	101.6	n/a	0.00e+00	0.000e0	0.000e0	0.00	n/a	n/a	n/a
S96T000500	Z		Alpha of Digested Solid	uCi/g	-1.0e+00	41.00	91.57	<2.140e-3	2.59e-02	1.930e-2	2.260e-2	29.2	93.88	6.000e-3	2.72E+01

=> Limit violated

=> Selected Limit

WHC-SD-WM-DP-181, REV. 0

INTERIM

U-109 Safety Screening Report
U-109 (P)

CORE NUMBER: 128
SEGMENT #: 4(U)

SEGMENT PORTION: U Upper Half of Segment

Sample#	R	A#	Analyte	Unit	Action Limits		Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
					Lower	Upper									
S96T000413			Bulk Density of Sample	g/mL	None	None	n/a	n/a	1.740	n/a	n/a	n/a	n/a	5.000e-1	n/a
S96T000426			% Water by TGA using Mettler	%	None	None	102.8	n/a	19.72	1.767e1	1.870e1	11.0	n/a	n/a	n/a
S96T000426			DSC Exotherm Dry Calculated	Joules/g Dry	-1.0e+00	480.0	n/a	n/a	0.00e+00	0.000e0	0.000e0	0.00	n/a	n/a	n/a
S96T000426			DSC Exotherm using Mettler	Joules/g	-1.0e+00	480.0	101.6	n/a	0.00e+00	0.000e0	0.000e0	0.00	n/a	n/a	n/a
S96T000501	Z		Alpha of Digested Solid	uCi/g	-1.0e+00	41.00	87.95	7.00e-03	4.73e-02	3.480e-2	4.110e-2	30.5	88.80	5.000e-3	1.85E+01

=> Limit violated
=> Selected Limit

WHC-SD-WM-DP-181, REV.0

INTERIM

U-109 Safety Screening Report
U-109 (P)

CORE NUMBER: 128
SEGMENT #: 4(L)

SEGMENT PORTION: L Lower Half of Segment

Sample#	R	A#	Analyte	Unit	Action Limits		Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
					Lower	Upper									
S96T000414			Bulk Density of Sample	g/mL	None	None	n/a	n/a	1.630	n/a	n/a	n/a	n/a	5.000e-1	n/a
S96T000427			% Water by TGA on Perkin Elmer	%	None	None	102.2	n/a	47.87	4.555e1	4.671e1	4.97	n/a	n/a	n/a
S96T000427			DSC Exotherm Dry Calculated	Joules/g Dry	-1.0e+00	480.0	n/a	n/a	2.68e+02	1.826e2	2.251e2	37.8	n/a	n/a	n/a
S96T000427			DSC Exotherm using Mettler	Joules/g	-1.0e+00	480.0	113.2	n/a	1.43e+02	9.730e1	1.199e2	37.8	n/a	n/a	n/a
S96T000502	Z		Alpha of Digested Solid	uCi/g	-1.0e+00	41.00	92.77	<7.900e-3	5.76e+02	6.590e-2	6.170e-2	13.4	91.07	1.800e-2	3.04E+01

=> Limit violated
=> Selected Limit

WHC-SD-WM-DP-181, REV.0

INTERIM

U-109 Safety Screening Report
U-109 (P)

CORE NUMBER: 128
SEGMENT #: 5

SEGMENT PORTION: W Whole Segment

Sample#	R A#	Analyte	Unit	Action Limits		Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
				Lower	Upper									
S96T000415		Bulk Density of Sample	g/mL	None	None	n/a	n/a	1.660	n/a	n/a	n/a	n/a	5.000e-1	n/a
S96T000428		% Water by TGA on Perkin Elmer	%	None	None	101.1	n/a	35.97	3.406e1	3.502e1	5.45	n/a	n/a	n/a
S96T000428		DSC Exotherm Dry Calculated	Joules/g Dry	-1.0e+00	480.0	n/a	n/a	13.70	2.124e1	1.747e1	43.2	n/a	n/a	n/a
S96T000428		DSC Exotherm using Mettler	Joules/g	-1.0e+00	480.0	113.2	n/a	8.900	1.380e1	1.135e1	43.2	n/a	n/a	n/a
S96T000503	Z	Alpha of Digested Solid	uCi/g	-1.0e+00	41.00	92.77	<7.900e-3	1.61e-02	1.350e-2	1.480e-2	17.6	88.78	1.700e-2	8.73E+01

⇒ Limit violated
⇒ Selected Limit

INTERIM

WHC-SD-WM-DP-181, REV.0

INTERIM

U-109 Safety Screening Report
U-109 (P)

CORE NUMBER: 128

SEGMENT #: 6(U)-

SEGMENT PORTION: U Upper Half of Segment

Sample#	R A#	Analyte	Unit	Action Limits		Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
				Lower	Upper									
S96T000416		Bulk Density of Sample	g/mL	None	None	n/a	n/a	1.670	n/a	n/a	n/a	n/a	5.000e-1	n/a
S96T000429		% Water by TGA using Mettler	%	None	None	99.73	n/a	34.45	3.540e1	3.492e1	2.72	n/a	n/a	n/a
S96T000504	Z	Alpha of Digested Solid	uCi/g	-1.0e+00	4.100	92.77	<7.900e-3	2.29e-02	2.860e-2	2.580e-2	22.1	89.54	1.800e-2	6.47E+01

=> Limit violated

=> Selected Limit

6F

INTERIM

WHC-SD-WM-DP-181, REV. 0

INTERIM

U-109 Safety Screening Report
U-109 (P)

CORE NUMBER: 128
SEGMENT #: 6(L)

SEGMENT PORTION: L Lower Half of Segment

Sample#	R	A#	Analyte	Unit	Action Limits		Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
					Lower	Upper									
S96T000417			Bulk Density of Sample	g/mL	None	None	n/a	n/a	1.680	n/a	n/a	n/a	n/a	5.000e-1	n/a
S96T000430			% Water by TGA using Mettler	%	None	None	99.73	n/a	33.26	3.337e1	3.331e1	0.33	n/a	n/a	n/a
S96T000430			DSC Exotherm Dry Calculated	Joules/g Dry	-1.0e+00	480.0	n/a	n/a	1.11e+02	1.161e2	1.138e2	4.13	n/a	n/a	n/a
S96T000430			DSC Exotherm using Mettler	Joules/g	-1.0e+00	480.0	100.5	n/a	74.30	7.740e1	7.585e1	4.09	n/a	n/a	n/a
S96T000505	Z		Alpha of Digested Solid	uCi/g	-1.0e+00	41.00	92.77	<7.900e-3	2.56e-02	1.510e-2	2.040e-2	51.6	87.50	1.900e-2	5.70E+01

=> Limit violated
=> Selected Limit

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INTERIM

U-109 Safety Screening Report
U-109 (P)

CORE NUMBER: 128
SEGMENT #: 7(U)

SEGMENT PORTION: U Upper Half of Segment

Sample#	R	A#	Analyte	Unit	Action Limits		Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
					Lower	Upper									
S96T000418			Bulk Density of Sample	g/mL	None	None	n/a	n/a	1.670	n/a	n/a	n/a	n/a	5.000e-1	n/a
S96T000431			% Water by TGA using Mettler	%	None	None	99.73	n/a	30.05	3.927e1	3.466e1	26.6	n/a	n/a	n/a
S96T000506		Z	Alpha of Digested Solid	uCi/g	-1.0e+00	4.1e+00	85.54	8.00e-03	2.72e-02	2.100e-2	2.410e-2	25.7	73.72	1.100e-2	3.90E+01

=> Limit violated

=> Selected Limit

WHC-SD-WM-DP-181, REV. 0

INTERIM

U-109 Safety Screening Report
U-109 (P)

CORE NUMBER: 128
SEGMENT #: 7(L)

SEGMENT PORTION: L Lower Half of Segment

Sample#	R	A#	Analyte	Unit	Action Limits		Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
					Lower	Upper									
S96T000419			Bulk Density of Sample	g/mL	None	None	n/a	n/a	1.670	n/a	n/a	n/a	n/a	5.000e-1	n/a
S96T000432			% Water by TGA using Mettler	%	None	None	99.73	n/a	41.96	3.918e1	4.057e1	6.85	n/a	n/a	n/a
S96T000432			DSC Exotherm Dry Calculated	Joules/g Dry	-1.0e+00	480.0	n/a	n/a	1.31e+02	1.344e2	1.328e2	2.49	n/a	n/a	n/a
S96T000432			DSC Exotherm using Mettler	Joules/g	-1.0e+00	480.0	100.9	n/a	77.90	7.990e1	7.890e1	2.53	n/a	n/a	n/a
S96T000507	Z		Alpha of Digested Solid	uCi/g	-1.0e+00	41.00	85.54	8.00e-03	3.41e+02	3.240e-2	3.330e-2	5.11	76.02	1.000e-2	3.09E+01

=> Limit violated
=> Selected Limit

INTERIM

WHC-SD-WM-DP-181, REV.0

INTERIM

U-109 Safety Screening Report
U-109 (P)

CORE NUMBER: 128
SEGMENT #: 8(U)

SEGMENT PORTION: U Upper Half of Segment

Sample#	R	A#	Analyte	Unit	Action Limits		Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
					Lower	Upper									
S96T000420			Bulk Density of Sample	g/mL	None	None	n/a	n/a	1.660	n/a	n/a	n/a	n/a	5.000e-1	n/a
S96T000433			% Water by TGA using Mettler	%	None	None	99.71	n/a	23.85	2.426e1	2.405e1	1.70	n/a	n/a	n/a
S96T000508	Z		Alpha of Digested Solid	uCi/g	-1.0e+00	41.00	85.54	8.00e-03	2.52e-02	2.240e-2	2.380e-2	11.8	75.51	7.000e-3	3.09E+01

=> Limit violated
=> Selected Limit

33

INTERIM

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INTERIM

U-109 Safety Screening Report
U-109 (P)

CORE NUMBER: 128
SEGMENT #: 8(L)

SEGMENT PORTION: L Lower Half of Segment

Sample#	R	A#	Analyte	Unit	Action Limits		Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
					Lower	Upper									
S96T000421			Bulk Density of Sample	g/mL	None	None	n/a	n/a	1.730	n/a	n/a	n/a	n/a	5.000e-1	n/a
S96T000434			% Water by TGA using Mettler	%	None	None	99.71	n/a	31.35	3.068e1	3.102e1	2.16	n/a	n/a	n/a
S96T000434			DSC Exotherm Dry Calculated	Joules/g Dry	-1.0e+00	480.0	n/a	n/a	0.00e+00	1.122e2	5.610e1	200	n/a	n/a	n/a
S96T000434			DSC Exotherm using Mettler	Joules/g	-1.0e+00	480.0	100.2	n/a	0.00e+00	7.740e1	3.870e1	200	n/a	n/a	n/a
S96T000509	Z		Alpha of Digested Solid	uCi/g	-1.0e+00	41.00	85.54	8.00e-03	4.81e-02	6.130e-2	5.470e-2	24.1	79.34	1.100e-2	3.17E+01

⇒ Limit violated
⇒ Selected Limit

34

INTERIM

WHC-SD-WM-DP-181, REV.0

INTERIM

U-109 Safety Screening Report
U-109 (P)

CORE NUMBER: 128
SEGMENT #: 9

SEGMENT PORTION: W Whole Segment

Sample#	R	A#	Analyte	Unit	Action Limits		Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
					Lower	Upper									
S96T000422			Bulk Density of Sample	g/mL	None	None	n/a	n/a	1.440	n/a	n/a	n/a	n/a	5.000e-1	n/a
S96T000435			% Water by TGA using Mettler	%	None	None	99.56	n/a	34.27	3.470e1	3.448e1	1.25	n/a	n/a	n/a
S96T000435			DSC Exotherm Dry Calculated	Joules/g Dry	-1.0e+00	480.0	n/a	n/a	0.00e+00	0.000e0	0.000e0	0.00	n/a	n/a	n/a
S96T000435			DSC Exotherm using Mettler	Joules/g	-1.0e+00	480.0	101.6	n/a	0.00e+00	0.000e0	0.000e0	0.00	n/a	n/a	n/a
S96T000510	Z		Alpha of Digested Solid	uCi/g	-1.0e+00	413.00	85.54	8.00e-03	6.42e-02	4.800e-2	5.610e-2	28.9	76.28	5.000e-3	1.50E+01

=> Limit violated
=> Selected Limit

INTERIM

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INORGANIC ANALYSES

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**Due to the large volume,
a copy of the data
supporting the Data
Validation Report and
the Sample Data Summary,**

Pages 58 thru 348

**is available only from
Central Files.**

**Information regarding this can be
found in the "Final Guidance on
Administrative Records for
Selecting CERCLA Response
Actions, OSWER Directive
9833.3A-1, December 1990.
Page 9 "Verified Sampling Data".**